AN ENIGMATIC NEW LAMBEOSAURINE HADROSAUR (REPTILIA: DINOSAURIA) FROM THE UPPER SHALE MEMBER OF THE CAMPANIAN AGUJA FORMATION OF TRANS-PECOS TEXAS

JONATHAN R. WAGNER* and THOMAS M. LEHMAN; Department of Geosciences, Texas Tech University, Lubbock, Texas 79409-1053, U.S.A.

Remains of large-bodied, herbivorous hadrosaurian ornithischians are the most abundant vertebrate macrofossils in latest Cretaceous terrestrial strata of North America (Lull and Wright, 1942; Horner et al., 2004), and have figured prominently in discussions of diversity, biogeography, and provinciality in the terminal Cretaceous (Lehman, 1987, 1997, 2001; Williamson, 2000; Sullivan and Lucas, 2003, 2006). Hadrosaur fossils have been collected in abundance from Big Bend National Park, Texas (herein ‘Big Bend’; Davies, 1983; Lehman, 1985; Wagner, 2001). Davies (1983) applied unpublished observations on postcranial variation (Brett-Surman, 1975) to conclude that two hadrosaur species were present in Campanian strata of the Aguja Formation, Kritosaurus cf. K. navajovius and an indeterminate lambeosaurine. Although significant new hadrosaur material has been recovered since Davies’ work, only preliminary observations have been published (Davies and Lehman, 1989; Wagner and Lehman, 1999, 2001; Wagner, 2001). The hadrosaurs of Big Bend have yet to contribute significantly to debates on latest Cretaceous faunal dynamics due to the paucity of skull material, upon which most hadrosaur taxonomy is based.

This report constitutes the first published description of a hadrosaur from Big Bend. Although the specimen consists solely of a left maxilla, it represents the most morphologically distinct new Campanian hadrosaur reported from North America in over two decades (Horner, 1982, 1983). This new species confirms Davies’ conclusion, and has implications for provinciality and endemism in the Campanian of North America.

SYSTEMATIC PALEONTOLOGY

HADROSAURIA von Huene, 1956
HADROSAURIDAE Cope, 1870
LAMBEOSAURINAE Parks, 1923
ANGULOMASTACATOR new genus

Type Species—Angulomastacator daviesi, by original designation in hoc loco.

Etymology—Angulus, -i (Latin), ‘corner, angle,’ in reference both to the unusual morphology of the maxilla and the Big Bend of the Rio Grande; μαστάξ, -ᾶς, -ακός (Greek) ‘jaw, mouth,’ and -τόρ (Latin) signifying agency; preferred translation ‘bend chower.’

Diagnosis—As for type and only species.

ANGULOMASTACATOR DAVIESI new species

Holotype—TMM 43681-1, incomplete left maxilla.

Occurrence—Locality TMM 43681, near Dawson Creek, upper shale member, Aguja Formation; precise locality information on file at the TMM.